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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,537	12/10/2004	Johann Reiner Godefridus Cornelis Maria Van Beek	NL 020541	1653

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EXAMINER
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TRAN, NGUYEN

ART UNIT	PAPER NUMBER
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2838

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/22/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/517,537	<b>Applicant(s)</b> VAN BEEK ET AL.	
	<b>Examiner</b> Nguyen Tran	<b>Art Unit</b> 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 6/14/02.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 June 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/10/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Objections*

Claims 4, and 8-10 objected to because of the following informalities:

Claim 4 objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only, cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claims 8-10 recites the limitation "said charging process". There is insufficient antecedent basis for this limitation in the claim. The claim contains no earlier recitation or limitation and where it would be unclear as to what element the limitation was making reference.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toya et al. (US 6304061) in view of Mullersman et al. (US 4297630).

Regarding claim 1 and 5: claim 5 it appears to invoke means-plus-function language and therefore is interpreted using 112 6<sup>th</sup> paragraphs.

A charger for charging a rechargeable unit further comprises:

“means for supplying...” at page 13, line 24 is interpreted as a supply unit. Paragraph [0002] of the application supporting this structure.

“means for interrupting...” at page 13, line 26 is interpreted as a control unit. Paragraph [0023] of the application supporting this structure.

Toya et al. discloses (Fig. 1) a charger for charging a rechargeable unit 2, such as a rechargeable battery or a rechargeable battery pack, comprises a supply unit 1 for supplying charging current to a rechargeable unit 2, characterized in that the charger further comprises:

(Fig. 8) a control unit 8 interrupting charging before the rechargeable unit has been charged to maximally 80% of its full capacity (Col. 7, lines 6-10),

but does not specifically discloses a supply unit supplying a charging current of more than 2 C-rates to the rechargeable unit.

Within the same field of endeavor, Mullersman et al. teaches a desirable purpose of provided a simple, low-cost charger for providing a sequential timed fast-rate charging mode and a slow-rate charging mode, also a reliable switching mode between charging rates (Col 2, lines 47-55), wherein supply unit 100 supplying a charging current of more than 2 C-rates to the rechargeable unit (Col. 3, lines 54-58).

Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to have substituted the charger of Toya's invention taught by Mullersman et al. to provide a fast-rate charging current for the rechargeable batteries of Toya's invention with a reasonable expectation of success because Mullersman et al. teaches that it would be desirable to do so at a cost which make them useful in the consumer market where economy of manufacture is so important.

Claims 3, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toya et al. (US 6304061) in view of Mullersman et al. (US 4297630) as applied respectively to claim(s) 5 above, and further in view of Peele et al. (US 5986433).

Regarding claim 3: Toya et al. and Mullersman et al. discloses all the limitations of the claim(s) 5 as discussed above.

Mullersman et al. further discloses charging current of more than 4 C-rates is used for charging a rechargeable unit (Col. 3, lines 52-58), but does not specifically discloses a rechargeable unit comprising an NiCd or an NiMH battery.

Within the same field of endeavor, Peele et al. teaches a desirable purpose of providing a battery back such as Nickel Cadmium (NiCd) for the high performance portable electronic devices, wherein a rechargeable unit comprising an NiCd (Col. 1, lines 11-17).

Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to have substituted a battery pack such as NiCd of Toya's and Mullersman's rechargeable battery taught by Peele et al. with a reasonable expectation of success because Peele et al. teaches a desirable purpose of providing a battery back such as Nickel Cadmium (NiCd) for the high performance portable electronic devices, wherein a rechargeable unit comprising an NiCd that rely on rechargeable battery pack to supply the power required for portable operation (Col. 1, lines 11-17).

Regarding claim 6: Toya et al. and Mullersman et al. discloses all the limitations of the claim(s) 5 as discussed above.

Toya et al. further discloses the rechargeable unit is charged to maximum 80% of its maximum capacity (Col. 7, lines 5-7),

but does not specifically disclose a boost charging mode at a current corresponding to more than 2 C-rates; and a normal charging mode at a current corresponding to maximum 1 C-rate.

Within the same field of endeavor, Mullersman et al. teaches a desirable purpose of provided a simple, low-cost charger for providing a sequential timed fast-rate charging mode and a slow-rate charging mode, also a reliable switching mode between charging rates (Col 2, lines 47-55), wherein a boost charging mode at a current corresponding to more than 2 C-rates (Col. 3, lines 52-57); and a normal charging mode at a current corresponding to maximum 1 C-rate (Col. 5, lines 42-44).

Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to have substituted the charger of Toya's invention taught by Mullersman et al. to provide a fast-rate charging mode to recharge a rechargeable unit to maximum 80% of its maximum capacity, or slow-rate charging mode to recharge a rechargeable unit to a fully charged at 80% of its maximum capacity of Toya's invention with a reasonable expectation of success because Mullersman et al. teaches that it would be desirable to do so at a cost which make them useful in the consumer market where economy of manufacture is so important.

Toya et al. and Mullersman et al. discloses all the limitations of the claim as discussed above, but does not specifically disclose the charger further comprises a manual selector.

Within the same field of endeavor, Peele et al. teaches a desirable purpose of provided a selector for selection of an active charge set by a user (Col. 2, lines 23-31), (Fig. 1 ) wherein the charge further comprises a manual selector 25 (Col. 4, lines 29-32 & lines 59-63).

Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to have incorporated a manual selector into Toya's and Mullersman's invention taught by Peele et al. for choosing between the fast-rate and slow-rate mode of Toya's and Mullersman's invention with a reasonable expectation of success because Peele et al. teaches a desirable purpose of provided a selector for selection of an active charge set by a user for lessening the chance that overcharging will occur inadvertently (Col. 2, lines 19-22).

**Regarding claim 7:** It appears to invoke means-plus-function language and therefore is interpreted using 112 6<sup>th</sup> paragraphs.

Wherein the charger comprises:

“mean for switching...” at page 13 line 7 is interpreted as a control unit. Paragraph [0047] of the application supporting this structure.

**Regarding claim 7:** Toya et al., Mullersman et al. and Peele et al. discloses all the limitations of the claim(s) 5 and 6 as discussed above.

Toya et al. disclosed the rechargeable unit is charged to maximum 80% of its maximum capacity (Col. 7, lines 5-7),

but does not specifically discloses a control unit for switching from the boost charging mode to the normal charging mode.

Within the same field of endeavor, Mullersman et al. teaches that teaches a desirable purpose of provided a simple, low-cost charger for providing a sequential timed fast-rate charging mode and a slow-rate charging mode, also a reliable switching mode between charging rates (Col 2, lines 47-55), wherein control unit for switching from the boost charging mode to the normal charging mode when the rechargeable unit has been charged to full capacity (Col. 1, lines

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64-67).

Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to have incorporated a control unit into Toya 's invention taught by Mullersman et al. for switching mode between charging rate when the rechargeable unit has been charged to maximally 80% of it full capacity of Toya's invention with a reasonable expectation of success because Mullersman et al. teaches that it would be desirable to do so at a cost which make them useful in the consumer market where economy of manufacture is so important.

**Claims 2 and 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over Toya et al. (US 6304061) in view of Mullersman et al. (US 4297630) as applied respectively to claim(s) 5 above, and further in view of Orban et al. (US 4513238).

**Regarding claim 8:** It appears to invoke means-plus-function language and therefore is interpreted using 112 6<sup>th</sup> paragraphs.

Wherein the charge comprises:

“means for automatically...” at page 13, line 12 is interpreted as a charger. Paragraph [0021] of the application supporting the structure and the specification does not give any further detail to support this mean.

Toya et al. and Mullersman et al. discloses all the limitations of the claim(s) 5 as discussed above,

Mullersman et al. further discloses charging the rechargeable unit to full capacity at a current corresponding to maximally 1 C-rate (Col. 5, lines 42-44),



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but does not specifically disclose a charger automatically switching to a normal charging mode for charging the rechargeable unit.

Within the same field of endeavor, Orban et al. teaches that it is advantageously provides an oscillator circuit for automatically switching between fast and slow charge modes so that the mode desired by the user can be readily selected merely by inserting the battery into the charger at a time when the charger is in the desired mode (Col. 1, lines 52-57), wherein the charger automatically switching to a normal charging mode (Abstract).

Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to have incorporated an oscillator circuit into Toya and Mullersman's invention taught by Orban et al. for automatically switching to a normal charging mode of Toya and Mullersman's invention with a reasonable expectation of success because Orban et al. teaches the advantage of an oscillator, will cycle at a slow rate and alternately set the charger in the fast or slow mode to enable "time" selection by the user of the desired charge mode (Col. 1, lines 63-68 & Col. 2, lines 1-2).

**Claim 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Toya et al. (US 6304061) in view of Mullersman et al. (US 4297630) as applied respectively to claim(s) 5 above, and further in view of Ehmke et al. (US 5115182).

**Regarding claim 9:** Toya et al. and Mullersman et al. discloses all the limitations of the claim(s) 5 as discussed above, but does not specifically disclose the charger comprises an LED for providing an indication to the user.

Within the same field of endeavor, Ehmke et al. teaches a desirable purpose of providing a LED as an indication that can visually alert the user when the battery is fully charge, (Fig. 1) wherein the charger comprises an LED 20 for providing an indication to the user (Col. 3, lines 58-62).

Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to have placed an LED into Toya's and Mullersman's invention taught by Ehmke et al. to visually alert the user when the interruption of the charger occurred of Toya's and Mullersman's invention with a reasonable expectation of success because Ehmke et al. teaches a desirable purpose of providing a LED as an indication that can visually alert the user (Col. 3, lines 58-61).

**Claim 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Toya et al. (US 6304061) in view of Mullersman et al. (US 4297630) as applied respectively to claim(s) 5 above, and further in view of Yuasa et al. (US 5113128).

**Regarding claim 10:** Toya et al. and Mullersman et al. discloses all the limitations of the claim(s) 5 as discussed above, but does not specifically discloses the timer unit being devised to interrupt said charging process after a predetermined time interval.

Within the same field of endeavor, Yuasa et al. teaches a desirable purpose of providing a timer that is capable of issuing the cut-off signal to prevent the over-charge (Col. 3, lines 9-10), (Fig. 3) wherein the timer unit 16 being devised to interrupt said charging process after a predetermined time interval (Col. 64-68).

Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to have placed a timer into Toya's and Mullersman's invention taught by Yuasa et al. to interrupt said charging process after a predetermined time interval with a reasonable expectation of success because Yuasa et al. teaches a desirable purpose of providing a timer that is capable of issuing the cut-off signal to prevent the over-charge (Col. 3, lines 9-10).

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen Tran whose telephone number is 571-270-1269. The examiner can normally be reached on M-F 7:30-5:00, OFF every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on 571-272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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A handwritten signature in black ink, appearing to read "G. L. Laxton". The signature is fluid and cursive, with the first name "G" being particularly large and stylized.

Gary L. Laxton  
Primary Examiner  
Art Unit 2838

NT N1

2/1/2007